



#3

<110> Feldmann, Richard J.

<120> ALGORITHMIC DETERMINATION OF FLANKING DNA SEQUENCES THAT
CONTROL THE EXPRESSION OF SETS OF GENES IN PROKARYOTIC,
ARCHAEA AND EUKARYOTIC GENOMES

<130> 3124-Z

<140> US 09/866,925

<141> 2001/05/30

<160> 249

<170> Proprietary

<210> 1

<211> 175

<212> DNA

<213> E. Coli

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<222> (3939065)...(3939239)

<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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tataatgcmc caccactgac acggaacaac ggcaaacacg ccgccgggtc agcgggggttc
120

tcctgagaac tccggcagag aaagcaaaaa taaatgcttg actctgtagc gggaa
175

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<213> E. Coli

<220>

<222> (4032781)...(4032955)

<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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aacggcaaac acgccgccgg gtcagcgggg ttctcctgag aactccggca gagaaagcaa
120

aaataaatgc ttgactctgt agcgggaagg cgtattatgc acaccccgcg ccgct
175

<210> 3

<211> 186

<212> DNA

<213> E. Coli
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 tagctggtct gagaggatga ccagccacac tggaactgag acacggtcca gactcctacg
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 ggaggcagca gtggggaata ttgcacaatg ggcgcaagcc tgatgcagcc atgccgcgtg
 180
 tatgaa
 186

<210> 4
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 <212> DNA
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 cccttagggg acgccacttg ctggtttgtg agtgaaagtc acctgcctta atatctcaaa
 120
 actcatcttc gggatgatgtt tgagatatatt gctctttaa aatctggatc aagctgaaaa
 180
 ttgaaa
 186

<210> 5
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 <212> DNA
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 tagaacgtcg tgagacagtt cggtccctat ctgccgtggg cgctggagaa ctgagggggg
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 ctgctcctag tacgagagga ccggagtgga cgcactactg gtgttcgggt tgtcatgcca
 180
 atggca
 186

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<210>          6
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<212>      DNA
<213>    E. Coli

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aaacagaatt  tgcctggcgg  ccgtagcgcg  gtggtcccac  ctgaccccat  gccgaactca
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gaagtgaaac  gccgtagcgc  cgatggtagt  gtgggggtctc  cccatgcgag  agtagggaac
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tgccaggcat  caaattaagc  agta
144

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<210>          7
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<212>      DNA
<213>    E. Coli

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<223>    Chromosome = 1  Strand = positive  ConnectronObjectNumber =
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ggtcataaaa  ccggtggttg  taaaagaatt  cggtggagcg  gtagttcagt  cggttagaat
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acctgcctgt  cacgcagggg  gtcgcggggt  cgagtcccg  ccgttccgcc  ac
112

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<210>          8
<211>        57
<212>      DNA
<213>    E. Coli

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<223>    Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3301

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ttatcgtgcc  tacaaatagt  ccgaaccgta  ggccggataa  ggcgtttacg  ccgcatac
57

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<210>          9
<211>        56
<212>      DNA
<213>    E. Coli

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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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56

<210> 10
<211> 347
<212> DNA
<213> E. Coli

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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3327

<400> 10
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tataatgcg caccactgac acggaacaac ggcaaacacg ccgccggggtc agcgggggttc
120
tcctgagaac tccggcagag aaagcaaaaa taaatgcttg actctgtagc gggaaggcgt
180
attatgcccg tcacaccatg ggagtggggtt gcaaaagaag taggtagctt aaccttcggg
240
agggcgctta ccactttgtg attcatgact ggggtgaagt cgtaacaagg taaccgtagg
300
ggaacctgcg gttggatcac ctcccttacct taaagaagcg ttctttg
347

<210> 11
<211> 347
<212> DNA
<213> E. Coli

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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tataatgcg caccactgac acggaacaac ggcaaacacg ccgccggggtc agcgggggttc
120
tcctgagaac tccggcagag aaagcaaaaa taaatgcttg actctgtagc gggaaggcgt
180
attatgcccg tcacaccatg ggagtggggtt gcaaaagaag taggtagctt aaccttcggg
240
agggcgctta ccactttgtg attcatgact ggggtgaagt cgtaacaagg taaccgtagg
300
ggaacctgcg gttggatcac ctcccttacct taaagaagcg ttctttg
347

<210> 12
 <211> 335
 <212> DNA
 <213> E. Coli

 <220>
 <222> (4163878)...(4165793)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 12
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 gcgccaccac tgacacggaa caacggcaaa cacgccgccg ggtcagcggg gttctcctga
 120
 gaactccggc agagaaagca aaaataaatg cttgactctg tagcgggaag gcgtattatg
 180
 cacaccacac catgggagtg gggtgcaaaa gaagtaggta gcttaacctt cgggagggcg
 240
 cttaccactt tgtgattcat gactgggggtg aagtcgtaac aaggtaaccg taggggaacc
 300
 tgcgggttga tcacctcctt accttaaaga agcgt
 335

<210> 13
 <211> 72
 <212> DNA
 <213> E. Coli

 <220>
 <222> (2729433)...(2729505)
 <223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
 2218

<400> 13
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 60
 acgccgccgg gc
 72

<210> 14
 <211> 43
 <212> DNA
 <213> H. Pylori

 <220>
 <222> (1062106)...(1062148)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 14
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 43

<210> 15
<211> 43
<212> DNA
<213> H. Pylori

<220>
<222> (1158533)...(1158575)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
882

<400> 15
tagcggaact aaagcattca tcccaaacac taaagatatt tgg
43

<210> 16
<211> 70
<212> DNA
<213> H. Pylori

<220>
<222> (1062106)...(1062175)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
813

<400> 16
ttttactcat aggggttttta tagttcctag cggaactaaa gcattcatcc caaacactaa
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agatatttgg
70

<210> 17
<211> 70
<212> DNA
<213> H. Pylori

<220>
<222> (1158506)...(1158575)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
881

<400> 17
ttttactcat aggggttttta tagttcctag cggaactaaa gcattcatcc caaacactaa
60
agatatttgg
70

<210> 18
<211> 70
<212> DNA
<213> H. Pylori

<220>
<222> (1062106)...(1062175)
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813

<400> 18
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60
agatatttgg
70

<210> 19
<211> 70
<212> DNA
<213> H. Pylori

<220>
<222> (1158506)...(1158575)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 19
ttttactcat aggggttttta tagttcctag cggaactaaa gcattcatcc caaacactaa
60
agatatttgg
70

<210> 20
<211> 56
<212> DNA
<213> H. Pylori

<220>
<222> (1614783)...(1614838)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1241

<400> 20
ttttactcat aggggttttta tagttcctag cggaactaaa gcattcatcc caaaca
56

<210> 21
<211> 37
<212> DNA
<213> S. Cervesiae

<220>
<222> (802985)...(803022)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1352

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37

<210> 22

<211> 362
<212> DNA
<213> S. Cervesiae

<220>
<222> (876188)...(876255)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
1416

<400> 22
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tagtatttac gttactagta tattatcata tacggtgtta gaagatgacg caaatgatga
120
gaaatagtca tctaaattag tggaagctga aacgcaagga ttgataatgt aataggatca
180
atgaatatta acatataaaa cgatgataat aatatttata gaattgtgta gaattgcaga
240
ttccctttta tggattccta aatccttgag gagaacttct agtatatcta cataccta
300
attatagcct taatcacaaat ggaatcccaa caattacatc aaaatccaca ttctctacag
360
ta
362

<210> 23
<211> 311
<212> DNA
<213> S. Cervesiae

<220>
<222> (804521)...(804831)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1356

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60
tcacgaaccc ttataagatc tgctcatcac atacactcag catcatctaa tcctgacata
120
aacgtagttg atgctcaaaa aagaaatata ccaattaacg ctattggtga cctacaattt
180
cacttccagg acaacaccaa aacatcaata aaggtattgc acactcctaa catagcctat
240
gacttactca gtttgaatga attggctgca gtagatatca cagcatgctt taccaaaaac
300
gtcttagaac g
311

<210> 24
<211> 346
<212> DNA
<213> S. Cervesiae

<220>
<222> (483301)...(483646)
<223> Chromosome =10 Strand = positive ConnectronObjectNumber =

4213

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gttatattat caatatatta tcatatacgg tgttaagatg atgacataag ttatgagaag
120
ctgtcatcga agttagagga agctgaaacg caaggattga taatgtaata ggatcaatga
180
atataaacat ataaaacgga atgaggaata atcgtaatat tagtatgtag aaatatagat
240
tccattttga ggattcctat atcctcgagg agaacttcta gtatattctg tatacctaata
300
attatagcct ttatcaacaa tggaatccca acaattatct caacat
346
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<210>          25
<211>          55
<212>          DNA
<213>          C. Elegans
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<222>          (578422)...(578476)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =
95
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<400>          25
cagcacgttc ttaaccatgc aaaatcagtt gagaactctg cgtctcttct cccgc
55
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<210>          26
<211>          36
<212>          DNA
<213>          C. Elegans
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<222>          (620454)...(620489)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =
138
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<400>          26
actctgcgtc tcttctcccg cattttttgt agatca
36
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```
<210>          27
<211>          69
<212>          DNA
<213>          C. Elegans
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<222>          (610219)...(610287)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 27
ttgagaactc tgcgtctcaa ctcccgcat ttttgtagat ctacgtagat caaaccgaaa
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tgggacact
69

<210> 28
<211> 89
<212> DNA
<213> C. Elegans

<220>
<222> (610886)...(610974)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
122

<400> 28
gcacggggtt ctggccttcc tcattgaatt tttcgcgctc cattgacaat cgccctgccgg
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acaacgcgtg ggaaagtcgt gtactccac
89

<210> 29
<211> 89
<212> DNA
<213> C. Elegans

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
125

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ttcatttcaa tttatgaggg aagccagaa
89

<210> 30
<211> 121
<212> DNA
<213> C. Elegans

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 30
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cgagctaggc ttaagcttag gcttaagctt aggccttttc tcaggcttag gcttaggctt
120
a
121

<210> 31
 <211> 190
 <212> DNA
 <213> C. Elegans

 <220>
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 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 132

<400> 31
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 acttagtctc actatcagtc ttaggcttag gcttagactt aggcttaagc ttaggcttaa
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 gcttagactt aggcttaggc ttaggcttag gcttaggctt aggtttgggc ttaggcttag
 180
 gcttaacctc
 190

<210> 32
 <211> 133
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (618905)...(619037)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 32
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 tttctgaatc cacgagctag gcttaagctt aggcttaagc ttaggccttt tctcaggctt
 120
 aggcttaggc tta
 133

<210> 33
 <211> 190
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (619063)...(619252)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 33
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 acttagtctc actatcagtc ttaggcttag gcttagactt aggcttaagc ttaggcttaa
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 gcttagactt aggcttaggc ttaggcttag gcttaggctt aggtttgggc ttaggcttag

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gcttaacctc
190

<210> 34
<211> 65
<212> DNA
<213> C. Elegans

<220>
<222> (1201848)...(1201912)
<223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
21719

<400> 34
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60
agatc
65

<210> 35
<211> 95
<212> DNA
<213> C. Elegans

<220>
<222> (1494075)...(1494169)
<223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
21949

<400> 35
accatgcaaa atcagttgag aactctgcgt ctcttctccc gcattttttg tagatctacg
60
tagatcaagc cgaaatgaga cactctgaca ccacg
95

<210> 36
<211> 61
<212> DNA
<213> C. Elegans

<220>
<222> (1167788)...(1167848)
<223> Chromosome = 5 Strand = negative ConnectronObjectNumber =
21655

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61

<210> 37
<211> 175

<212> DNA
 <213> E. Coli

 <220>
 <222> (3939065)...(3939239)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber = 3197

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60					
tataatgcg	caccactgac	acggaacaac	ggcaaacacg	ccgccgggtc	agcgggggttc
120					
tcctgagaac	tccggcagag	aaagcaaaaa	taaatgcttg	actctgtagc	gggaa
175					

<210> 38
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 <212> DNA
 <213> E. Coli

 <220>
 <222> (4032781)...(4032955)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber = 3308

<400>	38				
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60					
aacggcaaac	acgccgcggg	gtcagcgggg	ttctcctgag	aactccggca	gagaaagcaa
120					
aaataaatgc	ttgactctgt	agcgggaagg	cgtattatgc	acaccccgcg	ccgct
175					

<210> 39
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 <212> DNA
 <213> E. Coli

 <220>
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 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber = 3307

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60					
tataatgcg	caccactgac	acggaacaac	ggcaaacacg	ccgccgggtc	agcgggggttc
120					
tcctgagaac	tccggcagag	aaagcaaaaa	taaatgcttg	actctgtagc	gggaaggcgt
180					
attatgggag	tctgcaactc	gactccatga	agtcggaatc	gctagtaatc	gtggatcaga
240					
atgccacggt	gaatacgttc	ccgggccttg	tacacaccgc	ccgtcacacc	atgggagtg
300					
gttgcaaaag	aagtaggtag	cttaaccttc	gggagggcgc	ttaccacttt	gtgattcatg

360
actggggtga agtcgtaaca aggtaaccgt aggggaacct gcggttggat cacctcctta
420
ccttaaagaa gcgttctttg
440

<210> 40
<211> 335
<212> DNA
<213> E. Coli

<220>
<222> (4163878)...(4165793)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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60
gcgccaccac tgacacggaa caacggcaaa cagccgccg ggtcagcggg gttctcctga
120
gaactccggc agagaaagca aaaataaatg cttgactctg tagcgggaag gcgtattatg
180
cacaccacac catgggagtg ggttgcaaaa gaagtaggta gcttaacctt cgggagggcg
240
cttaccactt tgtgattcat gactggggtg aagtcgtaac aaggtaaccg taggggaacc
300
tgcggttggg tcacctcctt accttaaaga agcgt
335

<210> 41
<211> 72
<212> DNA
<213> E. Coli

<220>
<222> (2729433)...(2729505)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
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<400> 41
cttgtcaggc cggaataact ccctataatg cgccaccact gacacggaac aacggcaaac
60
acgccgccgg gc
72

<210> 42
<211> 175
<212> DNA
<213> M. Jannaschii

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 42
 ttattaatta gttcaaagga tttttattta atttctaagg gtttgctggt ttgattattt
 60
 agaatatattg agttttattga attattcaga tttttaaaaa ttaagattaa ttaggaaagg
 120
 aaataagatt tctctaacag acaagttaaa tttttggatt taaaaagata aaaat
 175

<210> 43
 <211> 175
 <212> DNA
 <213> M. Jannaschii

<220>
 <222> (1575229)...(1575403)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 1643

<400> 43
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 60
 agattttttaa aaattaggat taattaggca agtaaataaa atttctctaa caaataagtt
 120
 aaatttttgg atttaaaaag ataaaaatac tctgttttat tatggaaaga aagat
 175

<210> 44
 <211> 139
 <212> DNA
 <213> M. Jannaschii

<220>
 <222> (1570021)...(1570158)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 1629

<400> 44
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 tatttaattt ctaagggttt gctgggttga ttatttagaa tatttgagtt tattgaatta
 120
 ttcagatttt taaaaatta
 139

<210> 45
 <211> 177
 <212> DNA
 <213> M. Jannaschii

<220>
 <222> (1575227)...(1575403)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 1642

<400> 45
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 tcagattttt aaaaattagg attaattagg caagtaaata aaatttctct aacaaataag
 120
 ttaaattttt ggatttaaaa agataaaaat actctgtttt attatggaaa gaaagat
 177

<210> 46
 <211> 75
 <212> DNA
 <213> M. Jannaschii

<220>
 <222> (108469)...(108544)
 <223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
 124

<400> 46
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 60
 tcagattttt aaaat
 75

<210> 47
 <211> 58
 <212> DNA
 <213> M. Jannaschii

<220>
 <222> (1457575)...(1457632)
 <223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
 1533

<400> 47
 tttttattta atttctaagg gtttgctggt ttgattattt agaatatttg agttttatt
 58

<210> 48
 <211> 225
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (1071231)...(1071455)
 <223> Chromosome =12 Strand = positive ConnectronObjectNumber =
 5515

<400> 48
 aggaaattgt tgttacgaaa gtcagtgatt atgtattgtg tagtatagta tattgtaaga
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 aatttttttt tctaggggaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttgttgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180

ataaaaagta aacataaaat aaaggtagta agtagctttt ggttg
225

<210> 49
<211> 225
<212> DNA
<213> S. Cervesiae

<220>
<222> (1077921)...(1078145)
<223> Chromosome =12 Strand = positive ConnectronObjectNumber =
5533

<400> 49
attatgtatt gtgtagtata gtatattgta agaaattttt ttttctaggg aatatgcgtt
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ttgatgtagt agtatttcac tgttttgatt tagtgtttgt tgcacggcag tagcgagaga
120
caagtgggaa agagtaggat aaaaagacaa tctataaaaa gtaaacataa aataaaggta
180
gtaagtagct tttggttgaa catccgggta agagacaaca gggct
225

<210> 50
<211> 252
<212> DNA
<213> S. Cervesiae

<220>
<222> (1071231)...(1071481)
<223> Chromosome =12 Strand = positive ConnectronObjectNumber =
5516

<400> 50
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aatttttttt tctagggaa atgcgttttg atgtagtagt atttcactgt tttgatttag
120
tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
180
ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
240
gacaacaggg ct
252

<210> 51
<211> 252
<212> DNA
<213> S. Cervesiae

<220>
<222> (1077894)...(1078145)
<223> Chromosome =12 Strand = positive ConnectronObjectNumber =
5532

<400> 51
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttgttgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt gggtgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 52
 <211> 222
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (1531708)...(1531929)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
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<400> 52
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttgttgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt gg
 222

<210> 53
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (576521)...(576772)
 <223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
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<400> 53
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttgttgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt gggtgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 54
 <211> 252

<212> DNA
 <213> S. Cervesiae

 <220>
 <222> (12)...(263)
 <223> Chromosome = 5 Strand = negative ConnectronObjectNumber =
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<400> 54
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttgttgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 55
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (1090588)...(1090839)
 <223> Chromosome = 7 Strand = positive ConnectronObjectNumber =
 3286

<400> 55
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttgttgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
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 gacaacaggg ct
 252

<210> 56
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (562044)...(562295)
 <223> Chromosome = 8 Strand = positive ConnectronObjectNumber =
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<400> 56
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag

120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 57
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (5868)...(6119)
 <223> Chromosome =12 Strand = negative ConnectronObjectNumber =
 4764

<400> 57
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 aatTTTTTTT tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 58
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (231)...(482)
 <223> Chromosome =12 Strand = negative ConnectronObjectNumber =
 4751

<400> 58
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 aatTTTTTTT tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 59
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (208)...(459)
 <223> Chromosome =13 Strand = negative ConnectronObjectNumber =
 5536

<400> 59
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 60
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (119)...(370)
 <223> Chromosome =14 Strand = negative ConnectronObjectNumber =
 6102

<400> 60
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 61
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (947697)...(947948)
 <223> Chromosome =16 Strand = positive ConnectronObjectNumber =
 8023

<400> 61
 aggaaattgt tgttacgaaa gtcagtgatt atgtattgtg tagtatagta tattgtaaga
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 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct

180
ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
240
gacaacaggg ct
252

<210> 62
<211> 252
<212> DNA
<213> S. Cervesiae

<220>
<222> (28)...(278)
<223> Chromosome =16 Strand = negative ConnectronObjectNumber =
7356

<400> 62
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aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
120
tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
180
ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
240
gacaacaggg ct
252

<210> 63
<211> 89
<212> DNA
<213> S. Cervesiae

<220>
<222> (356)...(444)
<223> Chromosome = 8 Strand = negative ConnectronObjectNumber =
3293

<400> 63
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60
aatttttttt tctagggaaat atgcgtttt
89

<210> 64
<211> 87
<212> DNA
<213> S. Cervesiae

<220>
<222> (268)...(354)
<223> Chromosome = 8 Strand = negative ConnectronObjectNumber =
3291

<400> 64

atgtagtagt atttcactgt tttgatttag tgtttggtgc acggcagtag cgagagacaa
60
gtgggaaaga gtaggataaa aagacaa
87

<210> 65
<211> 73
<212> DNA
<213> S. Cervesiae

<220>
<222> (28)...(100)
<223> Chromosome = 2 Strand = negative ConnectronObjectNumber =
145

<400> 65
ctataaaaag taaacataaa ataaaggtag taagtagctt ttggttgaac atccgggtaa
60
gagacaacag gct
73

<210> 66
<211> 73
<212> DNA
<213> S. Cervesiae

<220>
<222> (193)...(266)
<223> Chromosome = 8 Strand = negative ConnectronObjectNumber =
3289

<400> 66
ctataaaaag taaacataaa ataaaggtag taagtagctt ttggttgaac atccgggtaa
60
gagacaacag gct
73

<210> 67
<211> 62
<212> DNA
<213> S. Cervesiae

<220>
<222> (218)...(278)
<223> Chromosome = 2 Strand = negative ConnectronObjectNumber =
146

<400> 67
aggaaattgt tgttacgaaa gtcagtgatt atgtattgtg tagtatagta tattgtaaga
60
aa
62

<210> 68

<211> 86
 <212> DNA
 <213> C. Elegans
 <220>
 <222> (19073696)...(19073784)
 <223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
 28632

<400> 68
 gcaaaaaattg actgaaaatt tgaatttccc gcaaaaaatt gactgaaaat ttgaatttcc
 60
 cgccaaaaat tgactgaaaa tttgaa
 86

<210> 69
 <211> 160
 <212> DNA
 <213> C. Elegans
 <220>
 <222> (19132234)...(19132392)
 <223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
 28697

<400> 69
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 cgccaaaaat tgactgaaaa tttgaatatc ccgcaaaaaa ttgactgaaa atttgaattt
 120
 cccgccgaaa attaaatgaa aaatggaatt tctcgccgaa
 160

<210> 70
 <211> 319
 <212> DNA
 <213> C. Elegans
 <220>
 <222> (12930007)...(12930325)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 4382

<400> 70
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 aaattgactg aaaatttgaa tttcccgcca aaaattgact gaaaatttga atatcccgcc
 120
 aaaaattgac tgaaaatttg aatttcccgc cgaaaattaa atgaaaaatg gaatttctcg
 180
 ccgaaaaatt cagtaaaaat ttgaatttcc tgccaaaaat tgactgaaaa tttgaatttc
 240
 ttgccaaaaa agtgactggg aatttgaatt tccctccaaa aattgactga aattttgaat
 300
 ttcccgttaa aagttgact
 319

<210> 71
 <211> 319
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (12928831)...(12929148)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 4375

<400> 71
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 aaattgactg aaaatttgaa tttcccgcca aaaattgact gaaaatttga atatcccgcc
 120
 aaaaattgac tgaaaatttg aatttcccgc cgaaaattaa atgaaaaatg gaatttctcg
 180
 ccgaaaaatt cagtaaaaat ttgaatttcc tgccaaaaat tgactgaaaa tttgaatttc
 240
 ttgccaaaaa agtgactggg aatttgaatt tccctccaaa aattgactga aatttgaat
 300
 ttcccgctaa aagttgact
 319

<210> 72
 <211> 85
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (19073700)...(19073784)
 <223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
 28633

<400> 72
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 gccaaaaatt gactgaaaat ttgaa
 85

<210> 73
 <211> 340
 <212> DNA
 <213> E. Coli

 <220>
 <222> (3941177)...(3941609)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 3208

<400> 73
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 ttgaaacact gaacaacgaa agttgttcgt gagtctctca aattttcgca acacgatgat

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120
gaatcgaaaag aaacatcttc gggttgtgag gttaagcgac taagcgtaca cggtggatgc
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cctggcagtg tgtttcgaca cactatcatt aactgaatcc ataggttaat gaggcgaacc
240
gggggaactg aaacatctaa gtaccccgag gaaaagaaat caaccgagat tccccagta
300
gcggcgagcg aacggggagc agcccagagc ctgaatcagt
340

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<210>          74
<211>          330
<212>          DNA
<213>          E. Coli

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<220>
<222>          (4034985)...(4035409)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =
3315

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cgtgagtcct tcaaattttc gcaactctga agtgaaacat cttcgggttg tgaggttaag
120
cgactaagcg tacacggtgg atgccctggc agtcagaggc gatgaaggac gtgctaattc
180
gcgatagggt aatgaggcga accgggggaa ctgaaacatc taagtacccc gaggaaaaga
240
aatcaaccga gattccccca gtagcggcga gcgaacgggg agcagcccag agcctgaatc
300
agtgtgtgtg ttagtggaag cgtctggaaa
330

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<210>          75
<211>          367
<212>          DNA
<213>          E. Coli

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<220>
<222>          (3941057)...(3941609)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =
3206

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<400>          75
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cccctagggg acgccacttg ctggtttgtg agtgaaagtc acctgcctta atatctcaaa
120
actcatcttc gggatgatgt tgagatatct gctctttaaa aatctggatc aagctgaaaa
180
ttgaaaaccg gcgatttccg aatggggaaa cccagtgtgt ttcgacacac tatcattaac
240
tgaatccata ggtaatatgag gcgaaccggg ggaactgaaa catctaagta ccccgaggaa
300
aagaaatcaa ccgagattcc cccagtagcg gcgagcgaac ggggagcagc ccagagcctg
360

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aatcagt
367

<210> 76
<211> 113
<212> DNA
<213> E. Coli

<220>
<222> (4165923)...(4166036)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3436

<400> 76
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60
tttcacggcg gtaacagggg ttcgaatccc ctaggggacg ccacttgctg gtt
113

<210> 77
<211> 150
<212> DNA
<213> E. Coli

<220>
<222> (4207315)...(4207464)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3476

<400> 77
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gacaccgccc tttcacggcg gtaacagggg ttcgaatccc ctaggggacg ccacttgctg
120
gtttgtgagt gaaagtcacc tgccttaata
150

<210> 78
<211> 553
<212> DNA
<213> E. Coli

<220>
<222> (3941057)...(3941609)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3206

<400> 78
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cccctagggg acgccacttg ctggtttgtg agtgaaagtc acctgcctta atatctcaaa
120
actcatcttc gggatgatgtt tgagatatct gctctttaaa aatctggatc aagctgaaaa
180
ttgaaacact gaacaacgaa agttgttcgt gagtctctca aattttcgca acacgatgat

240
 gaatcgaaag aaacatcttc gggttgtgag gttaagcgac taagcgtaca cgggtggatgc
 300
 cctggcagtc agaggcgatg aaggacgtgc taatctgcga taagcgtcgg taaggtgata
 360
 tgaaccgtta taaccggcga tttccgaatg gggaaaccca gtgtgtttcg acacactatc
 420
 attaactgaa tccataggtt aatgaggcga accggggggaa ctgaaacatc taagtacccc
 480
 gaggaaaaga aatcaaccga gattccccca gtagcggcga gcgaacgggg agcagcccag
 540
 agcctgaatc agt
 553

<210> 79
 <211> 94
 <212> DNA
 <213> E. Coli

<220>
 <222> (4166055)...(4166149)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 3439

<400> 79
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 ggatcaagct gaaaattgaa acactgaaca acga
 94

<210> 80
 <211> 94
 <212> DNA
 <213> E. Coli

<220>
 <222> (4207485)...(4207578)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400> 80
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 acaacgaaag ttgttcgtga gtctctcaaa tttt
 94

<210> 81
 <211> 367
 <212> DNA
 <213> E. Coli

<220>
 <222> (3941057)...(3941609)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 3206

<400> 81
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cccctagggg acgccacttg ctggtttgtg agtgaaagtc acctgcctta atatctcaaa
120
actcatcttc gggatgatgtt tgagatattt gctctttaaa aatctggatc aagctgaaaa
180
ttgaaaaccg gcgatttccg aatggggaaa ccagtggtgt ttcgacacac tatcattaac
240
tgaatccata ggttaatgag gcgaaccggg ggaactgaaa catctaagta ccccgaggaa
300
aagaaatcaa ccgagattcc ccagtagcgc gcgagcgaac ggggagcagc ccagagcctg
360
aatcagt
367

<210> 82
<211> 355
<212> DNA
<213> E. Coli

<220>
<222> (4166171)...(4169315)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3441

<400> 82
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taagcgtcgg taaggtgata tgaaccgtta taaccggcga tttccgaatg gggaaaccca
180
gtgtgtgatg agagaagatt ttcagcctga tacagattaa atcagaacgc agaagcggtc
240
tgataaaaca gaatttgcct ggcggcagta gcgcgggtgt cccacctgac cccatgccga
300
actcagaagt gaaacgccgt agcgccgatg gtagtgtggg gtctcccat gcgag
355

<210> 83
<211> 356
<212> DNA
<213> E. Coli

<220>
<222> (4207600)...(4210745)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3479

<400> 83
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gtcagaggcg atgaaggacg tgctaattctg cgataagcgt cggttaagggtg atatgaaccg
120
ttataaccgg cgatttccga atggggaaac ccagtggtgt tgcacacact atcattaact

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180
gaatcccaga ttaaatcaga acgcagaagc ggtctgataa aacagaattt gcctggcggc
240
agtagcgcgg tgggtcccacc tgaccccatg ccgaactcag aagtgaaacg ccgtagcgcc
300
gatggtagtg tgggggtctcc ccatgcgaga gtagggaact gccaggcatc aaatta
356

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<210>      84
<211>      367
<212>      DNA
<213>      E. Coli

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<220>
<222>      (3941057)...(3941609)
<223>      Chromosome = 1 Strand = positive ConnectronObjectNumber =
3206

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cccctagggg acgccacttg ctggtttgtg agtgaaagtc acctgcctta atatctcaaa
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actcatcttc ggggtgatgtt tgagatattt gctctttaaa aatctggatc aagctgaaaa
180
ttgaaaaccg gcgatttccg aatggggaaa ccagtggtgt ttcgacacac tatcattaac
240
tgaatccata ggttaatgag gcgaaccggg ggaactgaaa catctaagta ccccgaggaa
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aagaaatcaa ccgagattcc ccagtagcgc gcgagcgaac ggggagcagc ccagagcctg
360
aatcagt
367

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<210>      85
<211>      37
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<220>
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<223>      Chromosome = 1 Strand = positive ConnectronObjectNumber =
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<400>      85
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37

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<210>      86
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<212>      DNA
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<220>
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<223>      Chromosome = 1 Strand = positive ConnectronObjectNumber =

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611

<400> 86
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59

<210> 87
<211> 177
<212> DNA
<213> M. Jannaschii

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1642

<400> 87
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60
tcagattttt aaaaattagg attaattagg caagtaaata aaatttctct aacaaataag
120
ttaaatTTTT ggatttAAAA agataaaaat actctgtttt attatggaaa gaaagat
177

<210> 88
<211> 78
<212> DNA
<213> M. Jannaschii

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1139

<400> 88
atttattaat tagttcaaag gatttttatt taatttctaa gggttagctg gtttgattgt
60
ttaaaaatatt tgagttaa
78

<210> 89
<211> 78
<212> DNA
<213> M. Jannaschii

<220>
<222> (1049086)...(1049164)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1159

<400> 89
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tcagattttt aaaaatta

78

<210> 90
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<213> M. Jannaschii

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1642

<400> 90
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60
tcagattttt aaaaattagg attaattagg caagtaaata aaatttctct aacaaataag
120
ttaaattttt ggatttaaaa agataaaaat actctgtttt attatggaaa gaaagat
177

<210> 91
<211> 175
<212> DNA
<213> M. Jannaschii

<220>
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<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1630

<400> 91
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agaatatttg agttttattga attattcaga tttttaaaaa ttaagattaa ttaggaaagg
120
aaataagatt tctctaacag acaagttaaa tttttggatt taaaaagata aaaat
175

<210> 92
<211> 175
<212> DNA
<213> M. Jannaschii

<220>
<222> (1575229)...(1575403)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1643

<400> 92
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agatttttaa aaattaggat taattaggca agtaaataaa atttctctaa caaataagtt
120
aaatttttgg atttaaaaag ataaaaatac tctgttttat tatggaaaga aagat
175

<210> 93
 <211> 177
 <212> DNA
 <213> M. Jannaschii

 <220>
 <222> (1575227)...(1575403)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 1642

<400> 93
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 tcagatTTTT aaaaattagg attaattagg caagtaaata aaatttctct aacaaataag
 120
 ttaaattttt ggatttaaaa agataaaaat actctgtttt attatggaaa gaaagat
 177

<210> 94
 <211> 153
 <212> DNA
 <213> S. Cervesiae

 <220>
 <222> (9087)...(9240)
 <223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
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<400> 94
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 ttatcatata cggtgttaga agatgacgca aatgatgaga aatagtcatc taaattagtg
 120
 gaagctgaaa cgcaaggatt gataatgtaa tag
 153

<210> 95
 <211> 192
 <212> DNA
 <213> S. Cervesiae

 <220>
 <222> (29631)...(29821)
 <223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
 171

<400> 95
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 ttatcatata cggtgttaga agatgacaca aatgatgaga aatagtcatc taaattagtg
 120
 gaagctgaaa cgcaaggatt gataatgtaa taggatcaat gaatattaac atataaaatg
 180
 atgataataa ta

192

<210> 96
<211> 362
<212> DNA
<213> S. Cervesiae

<220>
<222> (160231)...(160592)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
86

<400> 96
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tttacattac tagtatatta tcatatacgg tgtagaaga tgacgcaa at gatgagaa at
120
agtcattctaa attagtggaa gctgaaacgc aaggattgat aatgta atag gatcaatgaa
180
tataaacata taaaacggaa tgaggaataa tcgta atatt agtatgtaga aatata gatt
240
ccattttgag gattcctata tcctcgagga gaacttctag tatattctgt atacctaata
300
ttatagcctt tatcaacaat ggaatcccaa caattatctc aacattcacc catttctcag
360
aa
362

<210> 97
<211> 258
<212> DNA
<213> S. Cervesiae

<220>
<222> (220996)...(221252)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
293

<400> 97
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tatcatatac ggtgttaaga tgatgacata agttatgaga agctgtcatc gaagttagag
120
gaagctgaag tgcaaggatt gataatgtaa taggataatg aaacatataa aacggaatga
180
ggaataatcg taatattagt atgtagaa atagattcca ttttgaggat tcctatatcc
240
ttgaggagaa cttctagt
258

<210> 98
<211> 77
<212> DNA
<213> S. Cervesiae

<220>

<222> (259532)...(259721)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
317

<400> 98
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60
ttctagtata ttctgtA
77

<210> 99
<211> 362
<212> DNA
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<220>
<222> (160231)...(160592)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
86

<400> 99
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tttacattac tagtatatta tcatatacgg tgttagaaga tgacgcaaat gatgagaaat
120
agtcattctaa attagtggaa gctgaaacgc aaggattgat aatgtaatag gatcaatgaa
180
tataaacata taaaacggaa tgaggaataa tcgtaatat agtatgtaga aatatagatt
240
ccattttgag gattcctata tcctcgagga gaacttctag tatattctgt atacctaata
300
ttatagcctt tatcaacaat ggaatcccaa caattatctc aacattcacc catttctcag
360
aa
362

<210> 100
<211> 145
<212> DNA
<213> S. Cervesiae

<220>
<222> (590560)...(594015)
<223> Chromosome =10 Strand = negative ConnectronObjectNumber =
4295

<400> 100
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gaataatcgt aatattagta tgtagaaata tagattccat tttgaggatt cctatatacct
120
cgaggagAAC ttctagtata ttctg
145

<210> 101

<211> 180
 <212> DNA
 <213> S. Cervesiae

<220>
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 <223> Chromosome =10 Strand = positive ConnectronObjectNumber = 4308

<400> 101
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 ggaatgagga ataatcgtaa tattagtatg tagaaatata gattccattt tgaggattcc
 120
 tatatcctcg aggagaactt ctagtatatt ctgtatacct aatattatag cctttatcaa
 180

<210> 102
 <211> 359
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (160234)...(160592)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber = 87

<400> 102
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 ttacattac tagtatatta tcatatacgg tgttagaaga tgacgcaa at gatgagaaat
 120
 agtcatctaa attagtggaa gctgaaacgc aaggattgat aatgtaatag gatcaatgaa
 180
 tataaacata taaaacggaa tgaggaataa tcgtaatatt agtatgtaga aatatagatt
 240
 ccattttgag gattcctata tcctcgagga gaacttctag tatattctgt ataccttaata
 300
 ttatagcctt tatcaacaat ggaatcccaa caattatctc aacattcacc cattttctca
 359

<210> 103
 <211> 147
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (586629)...(586708)
 <223> Chromosome =13 Strand = negative ConnectronObjectNumber = 5916

<400> 103
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 gaataatcgt aatattagta tgtagaaata tagattccat tttgaggatt cctatatacct
 120

cgaggagaac ttctagtata ttctgta
147

<210> 104
<211> 146
<212> DNA
<213> S. Cervesiae

<220>
<222> (599351)...(600871)
<223> Chromosome =13 Strand = negative ConnectronObjectNumber =
5923

<400> 104
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aatatagatt ccattttgag gattcctata tcctcgagga gaacttctag tatattctgt
120
atacctaata ttatagcctt tatcaa
146

<210> 105
<211> 359
<212> DNA
<213> S. Cervesiae

<220>
<222> (160234)...(160592)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
87

<400> 105
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tttacattac tagtatatta tcatatacgg tgttagaaga tgacgcaa at gatgagaaat
120
agtcacataa attagtggaa gctgaaacgc aaggattgat aatgtaatag gatcaatgaa
180
tataaacata taaaacggaa tgaggaataa tcgtaatat agtatgtaga aatatagatt
240
ccattttgag gattcctata tcctcgagga gaacttctag tatattctgt atacctaata
300
ttatagcctt tatcaacaat ggaatcccaa caattatctc aacattcacc catttctca
359

<210> 106
<211> 143
<212> DNA
<213> C. Elegans

<220>
<222> (1602973)...(1603115)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
16554

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<400>          106
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ttgtcaaatg aaagatcata gttgataaca taaattccca aagtttcata aaaatcgata
120
cgcagcgaac aaagttatca att
143

<210>          107
<211>          141
<212>          DNA
<213>          C. Elegans

<220>
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<223>          Chromosome = 4 Strand = positive ConnectronObjectNumber =
16661

<400>          107
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ataaattccc aaagtttcat aaaaatcgat acgcagcgaa caaagttatg atttttgacc
120
cggaacttat ttggagacct a
141

<210>          108
<211>          117
<212>          DNA
<213>          C. Elegans

<220>
<222>          (1129296)...(1129412)
<223>          Chromosome = 5 Strand = positive ConnectronObjectNumber =
21591

<400>          108
tattgtcaaa tgaaagatca tggttgataa cataaattcc cacaatttca taaaaatcga
60
tacgcagcga acaaagttat gatttttgac ccggaactta tttggagacc taatatt
117

<210>          109
<211>          72
<212>          DNA
<213>          C. Elegans

<220>
<222>          (1111083)...(1111154)
<223>          Chromosome = 5 Strand = positive ConnectronObjectNumber =
21565

<400>          109
ctccgagtta ggacacttgg ggtggacaaa aaattttgtg actattgtca aatgaaagat
60

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catggttgat aa
72

<210> 110
<211> 115
<212> DNA
<213> C. Elegans

<220>
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<223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
21590

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tacgcagcga acaaagttat gatttttgac ccggaactta tttggagacc taata
115

<210> 111
<211> 117
<212> DNA
<213> C. Elegans

<220>
<222> (1129296)...(1129412)
<223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
21591

<400> 111
tattgtcaaa tgaaagatca tggttgataa cataaattcc cacaatttca taaaaatcga
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tacgcagcga acaaagttat gatttttgac ccggaactta tttggagacc taatatt
117

<210> 112
<211> 274
<212> DNA
<213> D. Radiodurans

<220>
<222> (19204)...(19477)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2654

<400> 112
cagcgttttt ctgcgtgttc ctggacggct gaacgccctg aatctctccc ggtatgcagc
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ctgctcggag agtacgattc gtcgttggtc gcaccgaagt gacgatgggg ccattccgtg
120
gggcgcgtta caccaggcga ctgtcagtac agcaatcgag agtgggctga tcagcccact
180
gtgcgttctg gccatcgacg cctcttttca ccgcaaagcc ggtcagcaca ccgcacacct
240
cggctcgttc tggaatggct gtgccgcgcg gacc

274

<210> 113
<211> 274
<212> DNA
<213> D. Radiodurans

<220>
<222> (66380)...(66653)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2694

<400> 113
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gctgcaccga agtgacgatg gggccattcc gtggggcgcg ttacaccagg cgactgtcag
120
tacagcaatc gagagtgggc tgatcagccc actgtgcgtt ctggccatcg acgcctcttt
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tcaccgcaaa gccggtcagc acaccgcaca cctcggctcg ttctggaatg gctgtgccgc
240
gcggaccgaa cgcggaatcg agcaatcctg ttgt
274

<210> 114
<211> 103
<212> DNA
<213> D. Radiodurans

<220>
<222> (66276)...(66378)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2693

<400> 114
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ttcctgaccg tgctgctcag cgtttttctc gctgttcctg gac
103

<210> 115
<211> 186
<212> DNA
<213> D. Radiodurans

<220>
<222> (10410)...(10903)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
16

<400> 115
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gtcccgtgc gcaagacgca gcggaatttc ctgaccgtgc tgctcagcgt ttttctcgt
120

gttcctggac ggctgaacgc cctgaatctc tcccggtatg cagcctgctc ggagagtacg
180
attcgt
186

<210> 116
<211> 186
<212> DNA
<213> D. Radiodurans

<220>
<222> (153577)...(154071)
<223> Chromosome = 3 Strand = negative ConnectronObjectNumber =
2768

<400> 116
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60
gtcccgtctgc gcaagacgca gcggaatttc ctgaccgtgc tgctcagcgt ttttctcgct
120
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180
attcgt
186

<210> 117
<211> 186
<212> DNA
<213> D. Radiodurans

<220>
<222> (19158)...(20371)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2653

<400> 117
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cgattcgtcg ttggctgcac cgaagtgcac atggggccat tccgtggggc gcgttacacc
180
aggcga
186

<210> 118
<211> 103
<212> DNA
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<220>
<222> (66276)...(66378)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2692

<400> 118
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 ttcttgaccg tgctgctcag cgtttttctc gctgttcctg gac
 103

<210> 119
 <211> 103
 <212> DNA
 <213> D. Radiodurans

<220>
 <222> (134989)...(135092)
 <223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
 2749

<400> 119
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 ctcgctgttc ctggacggct gaacgccctg aatctctccc ggt
 103

<210> 120
 <211> 103
 <212> DNA
 <213> D. Radiodurans

<220>
 <222> (66276)...(66378)
 <223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
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 60
 ttcttgaccg tgctgctcag cgtttttctc gctgttcctg gac
 103

<210> 121
 <211> 274
 <212> DNA
 <213> D. Radiodurans

<220>
 <222> (66380)...(66653)
 <223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
 2695

<400> 121
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 gctgcaccga agtgacgatg gggccattcc gtggggcgcg ttacaccagg cgactgtcag
 120
 tacagcaatc gagagtgggc tgatcagccc actgtgcggt ctggccatcg acgcctcttt
 180

tcaccgcaaa	gccggtcagc	acaccgcaca	cctcggctcg	ttctggaatg	gctgtgccgc
240					
gcggaccgaa	cgcggaatcg	agcaatcctg	ttgt		
274					

<210> 122
 <211> 186
 <212> DNA
 <213> D. Radiodurans

<220>
 <222> (10410)...(10903)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber = 16

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60					
gtcccgtgctgc	gcaagacgca	gcggaatttc	ctgaccgtgc	tgctcagcgt	ttttctcgct
120					
gttcctggac	ggctgaacgc	cctgaatctc	tcccggtatg	cagcctgctc	ggagagtacg
180					
attcgt					
186					

<210> 123
 <211> 309
 <212> DNA
 <213> D. Radiodurans

<220>
 <222> (153577)...(154071)
 <223> Chromosome = 3 Strand = negative ConnectronObjectNumber = 2768

<400>	123				
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60					
gtcccgtgctgc	gcaagacgca	gcggaatttc	ctgaccgtgc	tgctcagcgt	ttttctcgct
120					
gttcctggac	ggctgaacgc	cctgaatctc	tcccggtatg	cagcctgctc	ggagagtacg
180					
attcgtcgga	ccgaacgcgg	aatcgagcaa	tcctgttgtg	ccctcattga	tgtccagcac
240					
cggcaggcct	tgacggtcga	tgtccgtcag	accctgaccg	ggctctgaggc	tccaactcgt
300					
ctggaacag					
309					

<210> 124
 <211> 103
 <212> DNA
 <213> D. Radiodurans

<220>
 <222> (66276)...(66378)

<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2693

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ttcctgaccg tgctgctcag cgtttttctc gctgttcctg gac
103

<210> 125
<211> 186
<212> DNA
<213> D. Radiodurans

<220>
<222> (19158)...(20371)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
2653

<400> 125
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120
cgattcgtcg ttggctgcac cgaagtgcac atggggccat tccgtggggc gcgttacacc
180
aggcga
186

<210> 126
<211> 67
<212> DNA
<213> A. Thaliana

<220>
<222> (499090)...(499156)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
423

<400> 126
tatctcttta aggattaaaa agtcaaatac taatttaatt aattaaattt aattaaaaaa
60
cgaaata
67

<210> 127
<211> 67
<212> DNA
<213> A. Thaliana

<220>
<222> (541441)...(541506)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
469

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60
aataacc
67

<210> 128
<211> 55
<212> DNA
<213> A. Thaliania

<220>
<222> (499167)...(499221)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
426

<400> 128
ttccaaaaat aataaccaat caaaatcaac atataagatt tgatatctaa atttt
55

<210> 129
<211> 55
<212> DNA
<213> A. Thaliania

<220>
<222> (499376)...(499430)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
430

<400> 129
ttgcggaaaa ataatatcat cattataaaa aaataattag agtttttttcg catat
55

<210> 130
<211> 118
<212> DNA
<213> A. Thaliania

<220>
<222> (1459740)...(1459856)
<223> Chromosome = 2 Strand = negative ConnectronObjectNumber =
972

<400> 130
gtatgccatt agaaataaaa ttttaaaagt aaattaattc atctctttta aaattaaaaa
60
gtcaaatact aatttaatta attaaattta attaaaaaac gaaatacatt attaattt
118

<210> 131
<211> 122
<212> DNA

<213> A. Thaliania
<220>
<222> (7695245)...(7695366)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
21396

<400> 131
tgccattaga aataaaattt taaagagtaa attaatttat ctctttaagg attaaaaagt
60
caaatactaa tttaattaat taaatttaat taaaaaacga aatacattat taatttccaa
120
aa
122

<210> 132
<211> 137
<212> DNA
<213> A. Thaliania

<220>
<222> (499020)...(499156)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
422

<400> 132
taaccttaat ttttgtaagt aattatatag gtatgccatt agaaataaaa ttttaaagag
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taaattaatt tatctcttta aggattaaaa agtcaaatac taatttaatt aattaaattt
120
aattaaaaaa cgaaata
137

<210> 133
<211> 65
<212> DNA
<213> A. Thaliania

<220>
<222> (8728632)...(8728695)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
21762

<400> 133
tttaaggatt aaaaagtcaa atactaattt aattaattaa atttaattaa aaaacgaaat
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acatt
65

<210> 134
<211> 65
<212> DNA
<213> A. Thaliania

<220>

<222> (8807426)...(8807490)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
21813

<400> 134
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acatt
65

<210> 135
<211> 56
<212> DNA
<213> A. Thaliana

<220>
<222> (11235682)...(11235740)
<223> Chromosome = 2 Strand = negative ConnectronObjectNumber =
10882

<400> 135
tatctcttta aggattaaaa agtcaaatac taatttaatt aattaaattt aattaa
56

<210> 136
<211> 132
<212> DNA
<213> D. Megalomaster

<220>
<222> (58403)...(58534)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
5081

<400> 136
acctaaaaga agtaccgttt tttactccta attaccaatt ctaaccatcc atatcacttt
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ttgacggact ccgtgaaaaat aatttttggc caaattttcg cattttttgt aaggggtaac
120
atcataaaaa tt
132

<210> 137
<211> 136
<212> DNA
<213> D. Megalomaster

<220>
<222> (145976)...(146117)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
5102

<400> 137
aaaaaagtac cgcgttttac tcctaattac caattctaac catccatata actttttgac

60
ggactccgtg aaaataattt ttggccaaat tttcgcatTT tttgtaaggg gtaacatcat
120
caaaatttgc gaaaaa
136

<210> 138
<211> 134
<212> DNA
<213> D. Megalomaster

<220>
<222> (145976)...(146109)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
5103

<400> 138
aaaaaagtac cgcgtttttac tcctaattac caattctaac catccatatc actttttgac
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ggactccgtt aaaataattt ttgaccaaTt tttcgcatTT tttgtaatca aaatttgcaa
120
aaaattgaaa aaac
134

<210> 139
<211> 83
<212> DNA
<213> D. Megalomaster

<220>
<222> (58553)...(58662)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
5084

<400> 139
caaaatttga atgcaaattcg attgggaatc aaaaaacaaa ctcaacgagg tatgacattc
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catatttggg ccattatttc caa
83

<210> 140
<211> 62
<212> DNA
<213> D. Megalomaster

<220>
<222> (146203)...(146286)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
5107

<400> 140
ttttttcaca aaaattagga aaatgatttt gggtaaaaaa atgaatattt aagttggggt
60
tt
62

<210> 141
 <211> 87
 <212> DNA
 <213> D. Megalomaster

 <220>
 <222> (146501)...(146587)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
 5110

<400> 141
 aaatcgattg ggaatcaaaa aacaaacctc aacgaggtat gacattccat atctgggcca
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 ttatttccaa tcttttgatc aaaatac
 87

<210> 142
 <211> 136
 <212> DNA
 <213> D. Megalomaster

 <220>
 <222> (146693)...(146828)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
 5114

<400> 142
 aaaaaagtac cgcgtttttac tcttaattac caattctaac catccatata actttttgac
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 ggactccgtg aaaataattt ttggccaaat ttcgcattt tttgtaaggg gtaacatcat
 120
 caaaatttgc gaaaaa
 136

<210> 143
 <211> 378
 <212> DNA
 <213> E. Coli

 <220>
 <222> (3939277)...(3939655)
 <223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
 3200

<400> 143
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 ttcttaacgt cgcaagacga aaaatgaata ccaagtctca agagtgaaca cgtaattcat
 120
 tacgaagttt aattctttga gcatcaaact tttaaattga agagtttgat catggctcag
 180
 attgaacgct ggcggcaggc ctaacacatg caagtcgaac ggtaacagga aacagcttgc
 240
 tgtttcgctg acgagtggcg gacgggtgag taatgtctgg gaaactgcct gatggagggg

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300
gataactact ggaaacggta gctaataccg cataacgtcg caagaccaaa gagggggacc
360
ttcgggcctc ttgccatc
378

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<210>          144
<211>          378
<212>          DNA
<213>          E. Coli

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<220>
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<223>          Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3310

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<400>          144
cagacaatct gtgtgggcac tcgaagatac ggattcttaa cgtcgcaaga cgaaaaatga
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ataccaagtc tcaagagtga acacgtaatt cattacgaag ttttaattctt tgagcgtcaa
120
acttttaaatt tgaagagttt gatcatggct cagattgaac gctggcggca ggcctaacac
180
atgcaagtcg aacggtaaca ggaagaagct tgcttctttg ctgacgagtg gcggacgggt
240
gagtaatgtc tgggaaactg cctgatggag ggggataact actggaaacg gtagctaata
300
ccgcataacg tcgcaagacc aaagaggggg accttcgggc ctcttgccat cggatgtgcc
360
cagatgggat tagctagt
378

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<210>          145
<211>          428
<212>          DNA
<213>          E. Coli

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<220>
<222>          (4163878)...(4165793)
<223>          Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3432

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<400>          145
tgcgcggtca gaaaattatt ttaaatttcc tcttgtcagg ccggaataac tccctataat
60
gcgccaccac tgacacggaa caacggcaaa cacgccgccg ggtcagcggg gttctcctga
120
gaactccggc agagaaagca aaaataaatg cttgactctg tagcgggaag gcgtattatg
180
cacacctgca actcgactcc atgaagtcgg aatcgctagt aatcgtggat cagaatgcc
240
cgggtgaatac gttcccgggc cttgtacaca ccgcccgta caccatggga gtgggttgca
300
aaagaagtag gtagcttaac cttcgggagg gcgcttacca ctttgtgatt catgactggg
360
gtgaagtcgt aacaaggtaa ccgtagggga acctgcgggt ggatcacctc cttaccttaa
420

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agaagcgt
428

<210> 146
<211> 43
<212> DNA
<213> H. Pylori

<220>
<222> (1062106)...(1062148)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
812

<400> 146
ttttactcat aggggttttta tagttcctag cggaactaaa gca
43

<210> 147
<211> 43
<212> DNA
<213> H. Pylori

<220>
<222> (1158533)...(1158575)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
882

<400> 147
tagcggaact aaagcattca tcccaaacac taaagatatt tgg
43

<210> 148
<211> 56
<212> DNA
<213> H. Pylori

<220>
<222> (1614783)...(1614838)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1241

<400> 148
ttttactcat aggggttttta tagttcctag cggaactaaa gcattcatcc caaaca
56

<210> 149
<211> 225
<212> DNA
<213> S. Cervesiae

<220>
<222> (1071231)...(1071455)
<223> Chromosome =12 Strand = positive ConnectronObjectNumber =
5515

<400> 149
 aggaaattgt tgttacgaaa gtcagtgatt atgtattgtg tagtatagta tattgtaaga
 60
 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttg
 225

<210> 150
 <211> 225
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (1077921)...(1078145)
 <223> Chromosome =12 Strand = positive ConnectronObjectNumber =
 5533

<400> 150
 attatgtatt gtgtagtata gtatattgta agaaattttt ttttctaggg aatatgcggt
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 ttgatgtagt agtatttcac tgttttgatt tagtgtttgt tgcacggcag tagcgagaga
 120
 caagtgggaa agagtaggat aaaaagacaa tctataaaaa gtaaacataa aataaaggta
 180
 gtaagtagct tttggttgaa catccgggta agagacaaca gggct
 225

<210> 151
 <211> 252
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (119)...(370)
 <223> Chromosome =14 Strand = negative ConnectronObjectNumber =
 6102

<400> 151
 aggaaattgt tgttacgaaa gtcagtgatt atgtattgtg tagtatagta tattgtaaga
 60
 aatttttttt tctagggaaat atgcgttttg atgtagtagt atttcactgt tttgatttag
 120
 tgtttggtgc acggcagtag cgagagacaa gtgggaaaga gtaggataaa aagacaatct
 180
 ataaaaagta aacataaaat aaaggtagta agtagctttt ggttgaacat ccgggtaaga
 240
 gacaacaggg ct
 252

<210> 152
 <211> 39

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<212>      DNA
<213>      C. Elegans

<220>
<222>      (1811936)...(1811974)
<223>      Chromosome = 1  Strand = positive  ConnectronObjectNumber =
569

<400>      152
aaatcgagcc  cgtaaatcga  cacaagcgct  acagtagtc
39

<210>      153
<211>      42
<212>      DNA
<213>      C. Elegans

<220>
<222>      (1842580)...(1842621)
<223>      Chromosome = 1  Strand = positive  ConnectronObjectNumber =
596

<400>      153
agtgtctacag  tagtcattta  aagaattact  gtagttttcg  ct
42

<210>      154
<211>      58
<212>      DNA
<213>      C. Elegans

<220>
<222>      (8067642)...(8067699)
<223>      Chromosome = 5  Strand = positive  ConnectronObjectNumber =
24442

<400>      154
gagcccgtaa  atcgacacaa  gcgctacagt  agtcatttaa  agaattactg  tagttttc
58

<210>      155
<211>      337
<212>      DNA
<213>      E. Coli

<220>
<222>      (3943192)...(3943527)
<223>      Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3216

<400>      155
agcgcaagcg  aagctcttga  tcgaagcccc  ggtaaacggc  ggccgtaact  ataacggtcc
60
taaggtagcg  aaattccttg  tcgggtaagt  tccgacctgc  acgaatggcg  taatgatggc

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120
caggctgtct  ccacccgaga  ctcagtgaaa  ttgaactcgc  tgtgaagatg  cagtgtaccc
180
gcggcaagac  ggaaagaccc  cgtgaacctt  tactatagct  tgacactgaa  cattgagcct
240
tgatgtgtag  gataggtggg  aggctttgaa  gtgtggacgc  cagtctgcat  ggagccgacc
300
ttgaaatacc  accctttaat  gtttgatggt  ctaacgt
337

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<210>          156
<211>          337
<212>          DNA
<213>          E. Coli

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<220>
<222>          (4036992)...(4037328)
<223>          Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3324

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<400>          156
cccggtaaac  ggcggccgta  actataacgg  tcctaaggta  gcgaaattcc  ttgtcgggta
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agttccgacc  tgcacgaatg  gcgtaatgat  ggccaggctg  tctccacccg  agactcagtg
120
aaattgaact  cgctgtgaag  atgcagtgta  cccgcggcaa  gacggaaaga  ccccgtagaac
180
ctttactata  gcttgacact  gaacattgag  ccttgatgtg  taggataggt  gggaggcttt
240
gaagtgtgga  cgccagtctg  catggagccg  accttgaaat  accacccttt  aatgtttgat
300
gttctaacgt  tgaccogtaa  tccgggttgc  ggacagt
337

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<210>          157
<211>          137
<212>          DNA
<213>          E. Coli

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<220>
<222>          (3944314)...(3944450)
<223>          Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3225

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<400>          157
aaacagaatt  tgcttggcgg  ccgtagcgcg  gtgggtccac  ctgaccccat  gccgaactca
60
gaagtgaaac  gccgtagcgc  cgatggtagt  gtgggggtctc  cccatgcgag  agtagggaac
120
tgccaggcat  caaatta
137

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```

<210>          158
<211>          285
<212>          DNA
<213>          E. Coli

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<220>
<222> (4036972)...(4038187)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3323

<400> 158
gcgaagctct tgatcgaagc cccggtaaac ggcggccgta actataacgg tcctaaggta
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gcgaaattcc ttgtcgggta agttccgacc tgcacgaatg gcgtaatgat ggccaggctg
120
tctccacccg agactcagtg aaattgaact cgctgtgaag atgcagtgta cccgcggcaa
180
gacggaaaca gaatttgcct ggcggcagta gcgcggtggt cccacctgac cccatgccga
240
actcagaagt gaaacgccgt agcgccgatg gtagtgtggg gtctc
285

<210> 159
<211> 52
<212> DNA
<213> E. Coli

<220>
<222> (3944389)...(3944440)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3227

<400> 159
agcgccgatg gtagtgtggg gtctcccat gcgagagtag ggaactgcca gg
52

<210> 160
<211> 52
<212> DNA
<213> E. Coli

<220>
<222> (4038189)...(4038240)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3329

<400> 160
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52

<210> 161
<211> 137
<212> DNA
<213> E. Coli

<220>
<222> (3944314)...(3944450)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3225

<400> 161
aaacagaatt tgcctggcgg ccgtagcgcg gtgggtccac ctgaccccat gccgaactca
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gaagtgaaac gccgtagcgc cgatggtagt gtgggggtctc cccatgcgag agtagggaac
120
tgccaggcat caaatta
137

<210> 162
<211> 33
<212> DNA
<213> M. Jannaschii

<220>
<222> (428220)...(428252)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
532

<400> 162
atatgtttga aatttgaaaa taagagtatt tag
33

<210> 163
<211> 47
<212> DNA
<213> M. Jannaschii

<220>
<222> (506924)...(506970)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
622

<400> 163
ttgaaaataa gagcatttag aagttattaa ttagttcaaa ggatttt
47

<210> 164
<211> 64
<212> DNA
<213> M. Jannaschii

<220>
<222> (428275)...(428338)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
533

<400> 164
atTTTTattt aatttctaag ggtagctgg tttgattatt tagaatattt gagtttattg
60
aatt
64

<210> 165
<211> 139
<212> DNA
<213> M. Jannaschii

<220>
<222> (1570021)...(1570158)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1629

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tattttaattt ctaagggttt gctgggtttga ttatttagaa tatttgagtt tattgaatta
120
ttcagatttt taaaaatta
139

<210> 166
<211> 78
<212> DNA
<213> M. Jannaschii

<220>
<222> (1034501)...(1034578)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1139

<400> 166
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60
ttaaaatatt tgagttta
78

<210> 167
<211> 78
<212> DNA
<213> M. Jannaschii

<220>
<222> (1049086)...(1049164)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1159

<400> 167
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60
tcagattttt aaaaatta
78

<210> 168
<211> 64
<212> DNA
<213> M. Jannaschii

<220>
<222> (428275)...(428338)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
533

<400> 168
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60
aatt
64

<210> 169
<211> 258
<212> DNA
<213> S. Cervesiae

<220>
<222> (220996)...(221252)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
293

<400> 169
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tatcatatac ggtgttaaga tgatgacata agttatgaga agctgtcatc gaagtttagag
120
gaagctgaag tgcaaggatt gataatgtaa taggataatg aaacatataa aacggaatga
180
ggaataatcg taatattagt atgtagaaat atagattcca tttgaggat tcctatatcc
240
ttgaggagaa cttctagt
258

<210> 170
<211> 77
<212> DNA
<213> S. Cervesiae

<220>
<222> (259722)...(259799)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
320

<400> 170
aatattagta ttagaaata tagattccat tttgaggatt cctatatact cgaggagaac
60
ttctagtata ttctgta
77

<210> 171
<211> 342
<212> DNA
<213> S. Cervesiae

<220>

<222> (226562)...(226903)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
298

<400> 171
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gttatattat caatatatta tcatatacgg tgттаagatg atgacataag ttatgagaag
120
ctgtcatcga agttagagga agctgaagtg caaggattga taatgtaata ggataatgaa
180
acataataaaa cggaatgagg aataatcgta atattagtat gtagaaatat agattccatt
240
ttgaggattc ctatatcctt gaggagaact tctagtatat tctgtatacc taatattata
300
gcctttatca acaatggaat cccaacaatt atctcaacat tc
342

<210> 172
<211> 362
<212> DNA
<213> S. Cervesiae

<220>
<222> (160231)...(160592)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
86

<400> 172
atctattaca ttatgggtgg tatgttggaa tagaaatcaa ctatcatcta ctaactagta
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tttacattac tagtatatta tcatatacgg tgттаagaaga tgacgcaaат gatgagaaat
120
agtcacataa attagtggaa gctgaaacgc aaggattgat aatgtaatag gatcaatgaa
180
tataaacata taaaacggaa tgaggaataa tcgtaatat agtatgtaga aatatagatt
240
ccattttgag gattcctata tcctcgagga gaacttctag tatattctgt atacctaata
300
ttatagcctt tatcaacaat ggaatcccaa caattatctc aacattcacc catttctcag
360
aa
362

<210> 173
<211> 313
<212> DNA
<213> S. Cervesiae

<220>
<222> (535752)...(536065)
<223> Chromosome = 7 Strand = positive ConnectronObjectNumber =
2840

<400> 173
tctgttggaa taaaaatcca ctatcgtcta tcaactaata gttatattat caatatatta

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60
tcataacg  tggttaagatg  atgacataag  ttatgagaag  ctgtcatcga  agttagagga
120
agctgaaacg  caaggattga  taatgtaata  ggatcaatga  atataaacat  ataaaacgga
180
atgaggaata  atcgtaatat  tagtatgtag  aaatatagat  tccattttga  ggattcctat
240
atcctcgagg  agaacttcta  gtatattctg  tatacctaaa  ttatagcctt  tatcaacaat
300
ggaatcccaa  caa
313

```

```

<210>          174
<211>          314
<212>          DNA
<213>          S. Cervesiae

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<220>
<222>          (541367)...(541680)
<223>          Chromosome = 7  Strand = positive  ConnectronObjectNumber =
2859

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<400>          174
ctatcaacta  atagttatat  tatcaatata  ttatcatata  cgggtgtaag  atgatgacat
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aagttatgag  aagctgtcat  cgaagttaga  ggaagctgaa  acgcaaggat  tgataatgta
120
ataggatcaa  tgaatataaa  catataaaac  ggaatgagga  ataatcgtaa  tattagtatg
180
tagaaatata  gattccattt  tgaggattcc  tatatcctcg  aggagaactt  ctagtatatt
240
ctgtatacct  aatattatag  cttttatcaa  caatggaatc  ccaacaatta  tctcaacatt
300
cacatatttc  tcat
314

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<210>          175
<211>          342
<212>          DNA
<213>          S. Cervesiae

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<220>
<222>          (226562)...(226903)
<223>          Chromosome = 2  Strand = positive  ConnectronObjectNumber =
298

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<400>          175
atctattaca  ttatgggtgg  tatgttgga  taaaaatcca  ctatcgtcta  tcaactaata
60
gttatattat  caatatatta  tcatatacgg  tggttaagatg  atgacataag  ttatgagaag
120
ctgtcatcga  agttagagga  agctgaagtg  caaggattga  taatgtaata  ggataatgaa
180
acataaaaaa  cggaatgagg  aataatcgta  atattagtat  gtagaaatat  agattccatt
240
ttgaggattc  ctatatacct  gaggagaact  tctagtatat  tctgtatacc  taatattata
300

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gcctttatca acaatggaat cccaacaatt atctcaacat tc
342

<210> 176
<211> 33
<212> DNA
<213> C. Elegans

<220>
<222> (599572)...(599604)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
110

<400> 176
agcttaggct taagcttagg cttaagctta ggc
33

<210> 177
<211> 123
<212> DNA
<213> C. Elegans

<220>
<222> (618459)...(618581)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
129

<400> 177
ttctcccgca ttttttgtag atctacgtag atcaaaccga aatgaggcac tttctgaatc
60
cacgagctag gcttaagctt aggcttaagc ttaggccttt tctcaggctt aggcttaggc
120
tta
123

<210> 178
<211> 89
<212> DNA
<213> C. Elegans

<220>
<222> (610997)...(611084)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
125

<400> 178
acgcgccgta aatctacccc agatatggcc gagccaaaat ggcctagttc ggcaaactct
60
ttcatttcaa tttatgaggg aagccagaa
89

<210> 179
<211> 166
<212> DNA

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<213>          C. Elegans

<220>
<222>          (2309822)...(2309987)
<223>          Chromosome = 4  Strand = negative  ConnectronObjectNumber =
16859

<400>          179
cttaggctta  agcttaggct  taagcttagg  cttaagctta  ggcttaagct  taggcttaag
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cttaggctta  agcttaggct  taagcttagg  cttaagctta  ggcttaagct  taggcttaag
120
cttaggctta  agcttaggct  taagcttagg  cttaagctta  gactta
166

<210>          180
<211>          57
<212>          DNA
<213>          C. Elegans

<220>
<222>          (1666666)...(1666721)
<223>          Chromosome = 5  Strand = positive  ConnectronObjectNumber =
22072

<400>          180
cgcaacgcgc  cgtaaattcta  cccagatat  ggccgagcca  aaatgaccta  gttcggc
57

<210>          181
<211>          170
<212>          DNA
<213>          C. Elegans

<220>
<222>          (1717752)...(1717922)
<223>          Chromosome = 5  Strand = positive  ConnectronObjectNumber =
22108

<400>          181
tgacaatcgc  ctgccggaca  acgcgtggaa  aagtgtcgtg  tactccacac  ggacaaatac
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atttagtttt  acaactaaaa  tcgaaccgcg  acgcgacacg  caacgcgacg  taaatctacc
120
ccagatatgg  ccgagccaaa  atggcctagt  tcggcaaact  cttctatttc
170

<210>          182
<211>          89
<212>          DNA
<213>          C. Elegans

<220>
<222>          (610997)...(611084)
<223>          Chromosome = 1  Strand = positive  ConnectronObjectNumber =

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125

<400> 182
acgcgccgta aatctacccc agatatggcc gagccaaaat ggcctagttc ggcaaactct
60
ttcatttcaa tttatgaggg aagccagaa
89

<210> 183
<211> 71
<212> DNA
<213> E. Coli

<220>
<222> (2042554)...(2042624)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1704

<400> 183
cgccccgttc acacgattcc tctgtagttc agtcggtaga acggcggact gttaatccgt
60
atgtcactgg t
71

<210> 184
<211> 71
<212> DNA
<213> E. Coli

<220>
<222> (2057883)...(2057952)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1718

<400> 184
ttcagtcggt agaacggcgg actgttaatc cgtatgtcac tggttcgagt ccagtcagag
60
gagccaaatt c
71

<210> 185
<211> 98
<212> DNA
<213> E. Coli

<220>
<222> (2042554)...(2042651)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1705

<400> 185
cgccccgttc acacgattcc tctgtagttc agtcggtaga acggcggact gttaatccgt
60
atgtcactgg ttcgagtcca gtcagaggag ccaaattc

98

<210> 186
<211> 86
<212> DNA
<213> E. Coli

<220>
<222> (2056044)...(2056129)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
1713

<400> 186
cacgattcct ctgtagttca gtcggtagaa cggcggactg ttaatccgta tgtcactggt
60
tcgagtccag tcagaggagc caaatt
86

<210> 187
<211> 98
<212> DNA
<213> E. Coli

<220>
<222> (2042554)...(2042651)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1705

<400> 187
cgccccgttc acacgattcc tctgtagttc agtcggtaga acggcggact gttaatccgt
60
atgtcactgg ttcgagtcca gtcagaggag ccaaattc
98

<210> 188
<211> 86
<212> DNA
<213> E. Coli

<220>
<222> (2056044)...(2056129)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
1713

<400> 188
cacgattcct ctgtagttca gtcggtagaa cggcggactg ttaatccgta tgtcactggt
60
tcgagtccag tcagaggagc caaatt
86

<210> 189
<211> 95
<212> DNA
<213> M. Jannaschii

<220>
<222> (1362801)...(1362895)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1447

<400> 189
ttatagaaca ttatgaagct ttttactcaa ctaacaaccg tatcgaattt accattactt
60
ggaaatctat ttaaaacctc tttaatctta tgata
95

<210> 190
<211> 95
<212> DNA
<213> M. Jannaschii

<220>
<222> (1385570)...(1385664)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1471

<400> 190
caactaaca ccgatcga tttaccatta cttggaaatc tatttaaaac ctctttaatc
60
ttgtgataat aaattcta cgaattcgta cttat
95

<210> 191
<211> 122
<212> DNA
<213> M. Jannaschii

<220>
<222> (1362801)...(1362922)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1448

<400> 191
ttatagaaca ttatgaagct ttttactcaa ctaacaaccg tatcgaattt accattactt
60
ggaaatctat ttaaaacctc tttaatctta tgataataaa ttctaatacga ttcgtgactt
120
at
122

<210> 192
<211> 116
<212> DNA
<213> M. Jannaschii

<220>
<222> (1385543)...(1385658)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1470

<400> 192
ttatagaaca ttatgaagct ttttactcaa ctaacaaccg tatcgaattt accattactt
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ggaaatctat ttaaaacctc tttaatcttg tgataataaa ttctaatacga ttcgtg
116

<210> 193
<211> 116
<212> DNA
<213> M. Jannaschii

<220>
<222> (1385543)...(1385658)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1470

<400> 193
ttatagaaca ttatgaagct ttttactcaa ctaacaaccg tatcgaattt accattactt
60
ggaaatctat ttaaaacctc tttaatcttg tgataataaa ttctaatacga ttcgtg
116

<210> 194
<211> 122
<212> DNA
<213> M. Jannaschii

<220>
<222> (1362801)...(1362922)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
1448

<400> 194
ttatagaaca ttatgaagct ttttactcaa ctaacaaccg tatcgaattt accattactt
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ggaaatctat ttaaaacctc tttaatctta tgataataaa ttctaatacga ttcgtgactt
120
at
122

<210> 195
<211> 258
<212> DNA
<213> S. Cervesiae

<220>
<222> (220996)...(221252)
<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
293

<400> 195
gaattgttgg aataaaaatc cactatcgtc tatcaactaa tagttatatt atcaatatat
60

tatcatatac	ggtgttaaga	tgatgacata	agttatgaga	agctgtcatc	gaagttagag
120					
gaagctgaag	tgcaaggatt	gataatgtaa	taggataatg	aaacatataa	aacggaatga
180					
ggaataatcg	taatattagt	atgtagaaat	atagattcca	ttttgaggat	tcctatatcc
240					
ttgaggagaa	cttctagt				
258					

<210> 196
 <211> 77
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (259722)...(259799)
 <223> Chromosome = 2 Strand = positive ConnectronObjectNumber = 320

<400>	196
aatattagta	tgtagaaata tagattccat tttgaggatt cctatatcct cgaggagaac
60	
ttctagtata	ttctgta
77	

<210> 197
 <211> 342
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (226562)...(226903)
 <223> Chromosome = 2 Strand = positive ConnectronObjectNumber = 298

<400>	197
atctattaca	ttatgggtgg tatgttgga taaaaatcca ctatcgtcta tcaactaata
60	
gttatattat	caatatatta tcatatacgg tgттаagatg atgacataag ttatgagaag
120	
ctgtcatcga	agttagagga agctgaagtg caaggattga taatgtaata ggataatgaa
180	
acatataaaa	cggaatgagg aataatcgta atattagtat gtagaaatat agattccatt
240	
ttgaggattc	ctatatacctt gaggagaact tctagtatat tctgtataacc taatattata
300	
gcctttatca	acaatggaat cccaacaatt atctcaacat tc
342	

<210> 198
 <211> 342
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (226562)...(226903)

<223> Chromosome = 2 Strand = positive ConnectronObjectNumber =
298

<400> 198
atctattaca ttatgggtgg tatggttgaa taaaaatcca ctatcgtcta tcaactaata
60
gttatattat caatatatta tcatatacgg tgttaagatg atgacataag ttatgagaag
120
ctgtcatcga agttagagga agctgaagtg caaggattga taatgtaata ggataatgaa
180
acataataaaa cggaatgagg aataatcgta atattagtat gtagaaatat agattccatt
240
ttgaggattc ctatatcctt gaggagaact tctagtatat tctgtatacc taatattata
300
gcctttatca acaatggaat cccaacaatt atctcaacat tc
342

<210> 199
<211> 29
<212> DNA
<213> C. Elegans

<220>
<222> (3201942)...(3201970)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
17154

<400> 199
aaatttccgg caaatcggca aactggcaa
29

<210> 200
<211> 29
<212> DNA
<213> C. Elegans

<220>
<222> (3291889)...(3291917)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
17190

<400> 200
aatttgccga tttgccgaat ttgtcgaca
29

<210> 201
<211> 56
<212> DNA
<213> C. Elegans

<220>
<222> (3201942)...(3201997)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
17155

<400> 201
aaatttccgg caaatcggca aactggcaat ttgccgattt gccgaatttg tcgaca
56

<210> 202
<211> 56
<212> DNA
<213> C. Elegans

<220>
<222> (3249055)...(3249109)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
17171

<400> 202
tggaaatttc agaatttcaa ttttaatcgg caaaattgta cgcattcctat gaattt
56

<210> 203
<211> 56
<212> DNA
<213> C. Elegans

<220>
<222> (3201942)...(3201997)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
17155

<400> 203
aaatttccgg caaatcggca aactggcaat ttgccgattt gccgaatttg tcgaca
56

<210> 204
<211> 362
<212> DNA
<213> S. Cervesiae

<220>
<222> (987140)...(987501)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1537

<400> 204
atgagatata tgtgggtaat tagataattg ttgggattcc attgttgata aaggctataa
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tattaggtat acagaatata ctagaagtgc tcctcgagga tttaggaatc cataaaaagg
120
aatctgcaat tctacacaat tctataaata ttattatcat cgttttatat gttaatatc
180
attgatccta ttacattatc aatccttgcg ttccagcttc cactaattta gatgactatt
240
tctcatcatt tgcgtcatct tctaacaccg tatatgataa tatactagta acgtaaatac
300
tagttagtag atgatagttg atttttattc caacatacca cccataatgt aatagatcta

360
at
362

<210> 205
<211> 362
<212> DNA
<213> S. Cervesiae

<220>
<222> (992326)...(992696)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1559

<400> 205
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tattaggtat acagaatata ctagaagttc tcctcgagga tttaggaatc cataaaaggg
120
aatctgcaat tctacacaat tctataaata ttattatcat cgttttatat gttaatatc
180
attgatccta ttacattatc aatccttgcg tttcagcttc cactaattta gatgactatt
240
tctcatcatt tgcgtcatct tctaacaccg tatatgataa tatactagta acgtaaatac
300
tagttagtag atgatagttg atttttattc caacatacca ccataatgt aatagatcta
360
at
362

<210> 206
<211> 387
<212> DNA
<213> S. Cervesiae

<220>
<222> (987140)...(987526)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1538

<400> 206
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tattaggtat acagaatata ctagaagttc tcctcgagga tttaggaatc cataaaaggg
120
aatctgcaat tctacacaat tctataaata ttattatcat cgttttatat gttaatatc
180
attgatccta ttacattatc aatccttgcg tttcagcttc cactaattta gatgactatt
240
tctcatcatt tgcgtcatct tctaacaccg tatatgataa tatactagta acgtaaatac
300
tagttagtag atgatagttg atttttattc caacatacca ccataatgt aatagatcta
360
atgaatccat ttgtttgtta atagttt
387

<210> 207
<211> 307
<212> DNA
<213> S. Cervesiae

<220>
<222> (991274)...(992696)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber = 1558

<400> 207
agcttctcat aacttatgtc atcatcttaa caccgtatat gataatatat tgataatata
60
acttggttga ataaaaatca actatcatct actaactagt atttacgtta ctagtatatt
120
atcatatacg gtgttagaag atgacgcaaa tgatgagaaa tagtcatcta aattagtgga
180
agctgagtct atctggcgaa tataaatttt tacgctacac acgtcatcga catctaaata
240
tgacagtcgc tgaactgttc ttagatatcc atgctattta tgaagaacaa cagggatcga
300
gaaacag
307

<210> 208
<211> 176
<212> DNA
<213> S. Cervesiae

<220>
<222> (246213)...(246388)
<223> Chromosome = 9 Strand = negative ConnectronObjectNumber = 3789

<400> 208
tttatatggt aatattcatt gatcctatta cattatcaat ccttgcgttt cagcttccac
60
taatttagat gactatttct catcatttgc gtcattcttct aacaccgtat atgataatat
120
actagtaacg taaatactag ttagtagatg atagttgatt ttatttccaa cagtat
176

<210> 209
<211> 325
<212> DNA
<213> S. Cervesiae

<220>
<222> (731677)...(732001)
<223> Chromosome =12 Strand = positive ConnectronObjectNumber = 5289

<400> 209
ggtgaatttt gagataattg ttgggattcc atttttaata aggcaataat attaggtatg
60
tagaatatac tagaagttct cctcgaggat ttaggaatcc ataaaaggga atctgcaatt

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120
ctacacaatt ctataaatat tattatcatc gttttatatg ttaatatcca ttgatacctat
180
tacattatca atccttgcggt ttcagcttcc actaatttag atgactatatt ctcatacattt
240
gcgtcatctt ctaacaccgt atatgataat atactagtaa cgtaaatact agttagtaga
300
tgatagttga tttttattcc aacac
325

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<210>          210
<211>          334
<212>          DNA
<213>          S. Cervesiae

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<220>
<222>          (357003)...(357336)
<223>          Chromosome =13 Strand = positive ConnectronObjectNumber =
5753

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<400>          210
ttgagaaatg ggggaatggt gagataattg ttgggattcc attgttgata aaggctataa
60
tattaggtat acagaatata ctagaagttc tcctcaagga tataggaatc ctcaaaatgg
120
aatctatatt tctacatact aatattacga ttattcctca ttccgtttta tatgtttcat
180
tattcctatta cattatcaat ccttgcaact cagcttcctc taacttcgat gacagcttct
240
cataacttat gtcatacatc taacaccgta tatgataata tattgataat ataactatta
300
gttgatagac gatagtggat ttttattcca acat
334

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<210>          211
<211>          37
<212>          DNA
<213>          C. Elegans

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<220>
<222>          (8234911)...(8234947)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =
2342

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<400>          211
tgaaaactac agtaattctt taaatgacta ctgtagc
37

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<210>          212
<211>          37
<212>          DNA
<213>          C. Elegans

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<220>
<222>          (8302006)...(8302042)
<223>          Chromosome = 1 Strand = positive ConnectronObjectNumber =

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2344

<400> 212
ctactgtagc gcttgtgtcg atttacgggc tcgattt
37

<210> 213
<211> 61
<212> DNA
<213> C. Elegans

<220>
<222> (8301966)...(8302025)
<223> Chromosome = 1 Strand = negative ConnectronObjectNumber =
2343

<400> 213
tcgacacaag cgctacagta gctattttaa gaattactgt agttttcgct acgagatatt
60
t
61

<210> 214
<211> 68
<212> DNA
<213> C. Elegans

<220>
<222> (7111696)...(7111762)
<223> Chromosome = 5 Strand = negative ConnectronObjectNumber =
24114

<400> 214
gcgaaaacta cagtaattct ttaaattgact actgtagcgc ttgtgtcgat ttacgggctc
60
gatttttcg
68

<210> 215
<211> 62
<212> DNA
<213> C. Elegans

<220>
<222> (19420036)...(19420100)
<223> Chromosome = 5 Strand = positive ConnectronObjectNumber =
29221

<400> 215
tttaaatttc ccgccaaaaa ttgactgaaa atttggattt tctttccaaa aattgacaga
60
aa
62

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<210>          216
<211>          31
<212>          DNA
<213>          C. Elegans

<220>
<222>          (19461396)...(19461428)
<223>          Chromosome = 5  Strand = positive  ConnectronObjectNumber =
29262

<400>          216
tgaaaatttg  aatttccgc  caaaaattaa  c
31

<210>          217
<211>          58
<212>          DNA
<213>          C. Elegans

<220>
<222>          (19420042)...(19420100)
<223>          Chromosome = 5  Strand = positive  ConnectronObjectNumber =
29222

<400>          217
aatttccgc  caaaaattga  ctgaaaattt  ggattttctt  tccaaaaatt  gacagaaa
58

<210>          218
<211>          54
<212>          DNA
<213>          C. Elegans

<220>
<222>          (19461232)...(19461284)
<223>          Chromosome = 5  Strand = positive  ConnectronObjectNumber =
29261

<400>          218
aaaattgact  gaaaatttga  atttcagcc  aaaaattgac  tgaaaatttg  aatt
54

<210>          219
<211>          317
<212>          DNA
<213>          C. Elegans

<220>
<222>          (12766193)...(12766602)
<223>          Chromosome = 1  Strand = negative  ConnectronObjectNumber =
4291

<400>          219

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aaaattaact	gaaaatttga	atttcccgcc	aaaaattgac	tgaaaatttg	aatttcccgcc
60					
caaaaaaaat	tgactgaaaa	tttgaatttc	ccgccaaaaa	ttgactgaaa	atttgaattt
120					
cccgccaaaa	attaattgaa	aatttgaatt	tcccgccaaa	aattaattga	aactttgaat
180					
tttcaaattt	cccgccaaaa	attaattgaa	actttgaatt	ttcaaatttc	ccgccaaaaa
240					
ttgactgaaa	atttgaattt	cccgccaaaa	attaattgaa	aatttgaatt	tttgaatttc
300					
ccgccaaaaa	tgactga				
317					

<210> 220
 <211> 318
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (513697)...(514013)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber = 1142

<400>	220				
attttgagat	aattgttggg	attccatttt	taataaggca	ataatattag	gtatgtagat
60					
atactagaag	ttctcctcga	ggatttagga	atccataaaa	gggaatctgc	aattctacac
120					
aattctataa	atattattat	catcatttta	tatgttaata	ttcattgatc	ctattacatt
180					
atcaatcctt	gcgtttcagc	ttccactaat	ttagatgact	atttctcatc	atttgcgtca
240					
tcttctaaca	ccgtatatga	taatatacta	gtaacgtaaa	tactagttag	tagatgatag
300					
ttgattttta	ttccaaca				
318					

<210> 221
 <211> 295
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (519351)...(519645)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber = 1156

<400>	221				
ttttaataag	gcaataatat	taggtatgta	gatatactag	aagttctcct	ccaggattta
60					
ggaatccata	aaagggaatc	tgcaattcta	cacaattcta	taaatattat	tatcatcatt
120					
ttatatgtta	atattcattg	atocatttac	attatcaatc	cttgcgtttc	agcttccact
180					
aatttagatg	actatttctc	atcatttgcg	tcatcttcta	acaccgtata	tgataatata
240					
ctagtaacgt	aaataactagt	tagtagatga	tagttgattt	ttattccaac	aagaa

295

<210> 222
<211> 349
<212> DNA
<213> S. Cervesiae

<220>
<222> (513697)...(514323)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1143

<400> 222
atTTtgagat aattgttggg attccatttt taataaggca ataattattag gtatgtagat
60
atactagaag ttctcctcga ggatttagga atccataaaa gggaatctgc aattctacac
120
aattctataa atattattat catcatttta tatgttaata ttcatgatac ctattacatt
180
atcaatctct aagtctcatt gcctttgtgc caaaaaatct gtttctaaat ttctcttcat
240
ttgtagactt aattatactg atcgttgatc tactatcagt aagtaagcct ttaataattg
300
gtttcttggt aagttcttgc acaagggtgac tgagggttatt caatagcgg
349

<210> 223
<211> 69
<212> DNA
<213> S. Cervesiae

<220>
<222> (519333)...(519401)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
1155

<400> 223
gaggagaact tctagtatat ctacatacct aatattattg ccttattaaa aatggaatcc
60
caacaatta
69

<210> 224
<211> 324
<212> DNA
<213> S. Cervesiae

<220>
<222> (731677)...(732001)
<223> Chromosome =12 Strand = positive ConnectronObjectNumber =
5289

<400> 224
ggtgaatttt gagataattg ttgggattcc atttttaata aggcaataat attaggtatg
60

tagaatatac	tagaagttct	cctcgaggat	ttaggaatcc	ataaaaaggga	atctgcaatt
120					
ctacacaatt	ctataaatat	tattatcatc	gttttatatg	ttaatattca	ttgatccctat
180					
tacattatca	atccttgcgt	ttcagcttcc	actaatttag	atgactattt	ctcatcattt
240					
gcgtcatctt	ctaacaccgt	atatgataat	atactagtag	gtaaataacta	gttagtagat
300					
gatagttgat	ttttattcca	acac			
324					

<210> 225
 <211> 366
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (645463)...(645828)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
 1243

<400>	225				
cgtgttttat	ctcatgttgt	tcgttttggt	attgagatat	atgtgggtaa	ttagataaatt
60					
gttgggattc	cattgttgat	aaaggctata	atattaggta	tacagaatat	actagaagtt
120					
ctcctcgagg	atntaggaat	ccataaaaagg	gaatctgcaa	ttctacacaa	ttctataaat
180					
attattatca	tcgttttata	tgttaatatt	cattgatcct	attacattat	caatccttgc
240					
gtttcagctt	ccactaat	agatgactat	ttctcatcat	ttgcgtcatc	ttctaacacc
300					
gtatatgata	atatactagt	aacgtaaata	ctagttagta	gatgatagtt	gatttttatt
360					
ccaaca					
366					

<210> 226
 <211> 273
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (651079)...(651444)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
 1272

<400>	226				
tgagatatat	gtgggtaatt	agataattgt	tgggattcca	ttgttgataa	aggctataat
60					
attaggtata	cagaatatac	tagaagttct	cctcgaggat	ttaggaatcc	ataaaaaggga
120					
atctgcaatt	ctacacaatt	ctataaatat	tattatcatc	gttttatatg	ttaatattca
180					
ttgatctata	ctagtaacgt	aaatactagt	tagtagatga	tagttgattt	ttattccaac
240					
agttataagg	ttgtttcata	tgtgttttat	gaa		

273

<210> 227
<211> 327
<212> DNA
<213> S. Cervesiae

<220>
<222> (645468)...(646073)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
1244

<400> 227
tttatctcat gttgttcggt ttgttattga gatatatgtg ggtaattaga taattgttgg
60
gattccattg ttgataaagg ctataatatt aggtatacag aatatactag aagttctcct
120
cgaggattta ggaatccata aaagggaatc tgcaattcta cacaattcta taaatattat
180
tatcatgtct cgatgtagta tacgtataaa ttattacctg atacttcatc tctaagtctc
240
attgcctttg tgccaaaaaa tctgtttcta aatttctctt catttgtaga cttaattata
300
ctgatcgttg atctactatc agtaagt
327

<210> 228
<211> 309
<212> DNA
<213> S. Cervesiae

<220>
<222> (651002)...(651496)
<223> Chromosome = 4 Strand = negative ConnectronObjectNumber =
1271

<400> 228
tggtgtatct caaaatgaga tatgtcagta tgacaatacg tcatcctaaa cgttcataaa
60
acacatatga aacaacctta taactgttgg aataaaaaatc aactatcatc tactaactag
120
tatttacggt actagtatat tatcatatac ggtgttagaa gatgacgcaa atgatgagaa
180
atagtccaac aatggaatcc caacaattat ctaattaccc acatatatct catggtagcg
240
cctgtgcttc ggttacttct aaggaagtcc acacaaatca agatccgtta gacgtttcag
300
cttccaaaa
309

<210> 229
<211> 325
<212> DNA
<213> S. Cervesiae

<220>

<222> (731677)...(732001)
 <223> Chromosome =12 Strand = positive ConnectronObjectNumber =
 5289

<400> 229
 ggtgaatttt gagataattg ttgggattcc atttttaata aggcaataat attaggtatg
 60
 tagaatatac tagaagttct cctcgaggat ttaggaatcc ataaaaggga atctgcaatt
 120
 ctacacaatt ctataaatat tattatcatc gttttatatg ttaatattca ttgatcctat
 180
 tacattatca atccttgcggt ttcagcttcc actaatttag atgactatctt ctcattcattt
 240
 gcgtcatctt ctaacaccgt atatgataat atactagtaa cgtaaatact agttagtaga
 300
 tgatagttga tttttattcc aacac
 325

<210> 230
 <211> 365
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (704030)...(704394)
 <223> Chromosome =15 Strand = positive ConnectronObjectNumber =
 7102

<400> 230
 catgattaat atgaccaatc ggcgtgtggt tttgaaaagt ggggtgaattt tgagataatt
 60
 gttgggattc catttttaaat aaggcaataa tattaggtat gtagaatgta ctagaagttc
 120
 tcctcaagga ttttaggaatc catgaaaggg aatctgcaat tctacacaat tctataaata
 180
 ttattatcat catttttatat gttaatatcc attgatccta ttacattatc aatccttgcg
 240
 tttcagcttc cactaattta gatgactatt tctcatcatt tgcgtcatct tctaacaccg
 300
 tatatgataa tatactagta acgtaaatac tagttagtag atgatagttg atttttattc
 360
 caaca
 365

<210> 231
 <211> 365
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (709690)...(710053)
 <223> Chromosome =15 Strand = positive ConnectronObjectNumber =
 7117

<400> 231
 tgaaaagtgg gtgaattttg agataattgt tgggattcca tttttaataa ggcaataata

60
 ttaggtatgt agaatgtact agaagttctc ctcaaggatt taggaatcca tgaaagggaa
 120
 tctgcaattc tacacaattc tataaatatt attatcatca ttttatatgt taatattcat
 180
 tgatcctatt acattatcaa tccttgcggt tcagcttcca ctaatttaga tgactatttc
 240
 tcatcatttg cgtcatcttc taacaccgta tatgataata tactagtaac gtaaatacta
 300
 gttagtagat gatagttgat ttttattcca acagttttat atacctctct tatttagtat
 360
 aagaa
 365

<210> 232
 <211> 357
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (704138)...(704494)
 <223> Chromosome =15 Strand = negative ConnectronObjectNumber =
 7103

<400> 232
 aagaacattg ctgatgtgat gacaaaacct cttccgataa aaacatttaa actattaact
 60
 aacaaatgga ttcattagat ctattacatt atgggtggta tggttgaata aaaatcaact
 120
 atcatctact aactagtatt tacgttacta gtatattatc atatacgggtg ttagaagatg
 180
 acgcaaatga tgagaaatag tcatctaaat tagtggaagc tgaaacgcaa ggattgataa
 240
 tgtaaatagga tcaatgaata ttaacatata aaatgatgat aataatattt atagaattgt
 300
 gtagaattgc agattccctt tcatggattc ctaaatacctt gaggagaact tctagta
 357

<210> 233
 <211> 66
 <212> DNA
 <213> S. Cervesiae

<220>
 <222> (709483)...(709548)
 <223> Chromosome =15 Strand = positive ConnectronObjectNumber =
 7116

<400> 233
 ccattctgtg gaggtggtac tgaagcaggt tgaggagaga catgatgatg gttctctgga
 60
 acagct
 66

<210> 234
 <211> 325


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<212>      DNA
<213>      S. Cervesiae

<220>
<222>      (731677)...(732001)
<223>      Chromosome =12  Strand = positive  ConnectronObjectNumber =
5289

<400>      234
ggtgaatttt gagataattg ttgggattcc atttttaata aggcaataat attaggtatg
60
tagaatatac tagaagttct cctcgaggat ttaggaatcc ataaaaggga atctgcaatt
120
ctacacaatt ctataaatat tattatcatc gttttatatg ttaatatcca ttgatcctat
180
tacattatca atccttgcggt ttcagcttcc actaatttag atgactatct ctcattcattt
240
gcgtcatctt ctaacaccgt atatgataat atactagtaa cgtaaatact agttagtaga
300
tgatagttga tttttattcc aacac
325

<210>      235
<211>      33
<212>      DNA
<213>      C. Elegans

<220>
<222>      (10245691)...(10245722)
<223>      Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3101

<400>      235
caaatcgcca aattgccgga attgaacatt tcc
33

<210>      236
<211>      54
<212>      DNA
<213>      C. Elegans

<220>
<222>      (10261616)...(10261669)
<223>      Chromosome = 1  Strand = positive  ConnectronObjectNumber =
3120

<400>      236
aaacgatttt tccggcaaat cggcaaattg ccggaattgt aatttccggc aaat
54

<210>      237
<211>      55
<212>      DNA
<213>      C. Elegans

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<220>
<222> (10245748)...(10245802)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3103

<400> 237
ttaaaatttc cggcaaattcg gcaaattggc agaaatgaaa ctcacggcaa atcgg
55

<210> 238
<211> 61
<212> DNA
<213> C. Elegans

<220>
<222> (10258394)...(10258455)
<223> Chromosome = 1 Strand = positive ConnectronObjectNumber =
3119

<400> 238
cccgcatTTTT ttgtagatca aaccgtaatg ggacggcctg gcaacacgtg attttccaaa
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t
61

<210> 239
<211> 124
<212> DNA
<213> C. Elegans

<220>
<222> (2053620)...(2053742)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
16760

<400> 239
ggcaaattgc cgaaattgaa catttccggc aaatcggcaa attgccggaa ttgaacattt
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ccggcaaattc ggcaaattgc cggaattgaa catttccggc aaatcggcaa attgccggaa
120
ttga
124

<210> 240
<211> 141
<212> DNA
<213> C. Elegans

<220>
<222> (10893918)...(10894058)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
14840

<400> 240

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aaaaatttcc  ggcaagtcgg  caattttccg  aaaatgaaaa  tttccggcaa  atcggcaaat
60
tgccggaatt  gaaaattcct  ggcaaatacag  caaatttgcg  gcaaatacggc  aatttgccga
120
aaatgaaaaat  tttccggcaaa  t
141

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<210>          241
<211>          98
<212>          DNA
<213>          C. Elegans

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<220>
<222>          (10981034)...(10981131)
<223>          Chromosome = 3  Strand = positive  ConnectronObjectNumber =
15042

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<400>          241
caaatcggta  ggtaaattgg  ccaaacttga  aaatttccgg  caaatcggca  aattccgcca
60
actgaacatt  tccggcaaat  cggcaaattg  ctcgaact
98

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<210>          242
<211>          141
<212>          DNA
<213>          C. Elegans

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<220>
<222>          (10893918)...(10894058)
<223>          Chromosome = 3  Strand = positive  ConnectronObjectNumber =
14841

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<400>          242
aaaaatttcc  ggcaagtcgg  caattttccg  aaaatgaaaa  tttccggcaa  atcggcaaat
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tgccggaatt  gaaaattcct  ggcaaatacag  caaatttgcg  gcaaatacggc  aatttgccga
120
aaatgaaaaat  tttccggcaaa  t
141

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<210>          243
<211>          55
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<213>          C. Elegans

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<220>
<222>          (10979986)...(10980040)
<223>          Chromosome = 3  Strand = negative  ConnectronObjectNumber =
15041

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<400>          243
cggcaattgc  cgttcggcaa  tttgccaatt  tgccggaaat  tttcaattcc  ggcaa
55

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<210> 244
 <211> 124
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (2053620)...(2053742)
 <223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
 16760

<400> 244
 ggcaaattgc cgaaattgaa catttcgggc aaatcggcaa attgccggaa ttgaacattt
 60
 ccggc aaatc ggcaaattgc cggaattgaa catttcgggc aaatcggcaa attgccggaa
 120
 ttga
 124

<210> 245
 <211> 336
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (11116705)...(11117226)
 <223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
 15365

<400> 245
 aaaatttccg gcaaattcggc aatttgccaa aaattgaaat ttccggcaaaa tcggcaattt
 60
 gtcaaaaatg aaaatttccg gcaaattcggc aaattgccga aaatgaaaat ttccggcaaaa
 120
 tcggcaaaact tccggaactg aaaatttccg gcaaattcggc aatttgccat aaatgaacat
 180
 ttccggggcg aaaattaaaa tttccgccat atcggcaatt tgccaaaaaa ttaaaatttc
 240
 cggcaaatcg gcaaattgcc ggaattcaaa atttccggca aaccggcaaaa ttgccggaac
 300
 tcaaaattcc cggcaaatca gcaaattgcc ggaatt
 336

<210> 246
 <211> 68
 <212> DNA
 <213> C. Elegans

 <220>
 <222> (11215714)...(11215781)
 <223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
 15627

<400> 246
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 60

tgaaattt
68

<210> 247
<211> 60
<212> DNA
<213> C. Elegans

<220>
<222> (11116771)...(11116830)
<223> Chromosome = 3 Strand = negative ConnectronObjectNumber =
15366

<400> 247
tgccgatttg cgggaaattt tcattttcgg caatttgccg atttgccgga aattttcatt
60

<210> 248
<211> 54
<212> DNA
<213> C. Elegans

<220>
<222> (11215572)...(11215625)
<223> Chromosome = 3 Strand = positive ConnectronObjectNumber =
15625

<400> 248
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54

<210> 249
<211> 124
<212> DNA
<213> C. Elegans

<220>
<222> (2053620)...(2053742)
<223> Chromosome = 4 Strand = positive ConnectronObjectNumber =
16760

<400> 249
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ccggcaaatc ggcaaattgc cggaattgaa catttcggc aaatcgga attgccgga
120
ttga
124